DOCUMENT RESUME

ED 480 635 CS 512 433

AUTHOR	Smith, Carl B., Ed.
TITLE	Phonological Awareness. ERIC Topical Bibliography and Commentary.
INSTITUTION	ERIC Clearinghouse on Reading, English and Communication, Bloomington, IN.
SPONS AGENCY	Institute of Education Sciences (ED), Washington, DC.
PUB DATE	2003-09-00
NOTE	6p.
CONTRACT	ED-99-CO-0028
AVAILABLE FROM	ERIC Clearinghouse on Reading, English and Communication, 2805 E. 10th St., # 140, Bloomington, IN 47408-2698. Web site: http://eric.indiana.edu.
PUB TYPE	Information Analyses (070) -- ERIC Publications (071) -- Reference Materials - Bibliographies (131)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	*Beginning Reading; Bibliographies; Literature Reviews; *Phonemic Awareness; Phonics; *Phonological Awareness; Primary Education; *Reading Instruction; *Reading Processes; Reading Research

ABSTRACT

This Topical Bibliography and Commentary examines recent studies on phonological awareness, finding the evidence conclusive that teaching phonological awareness to young children greatly facilitates the reading process. Researchers have studied problems children experience in reading for many years. The focus of research during the 1990s has been early detection of readers who are considered at-risk. The significance placed on early detection has led researchers to study the impact phonological awareness has on young children in their early reading activities. Smith defines phonological awareness as "sensitivity to sound structure of language and a conscious ability to detect, combine, and manipulate different sizes of sound units." To accurately understand phonological awareness, it is important to understand the difference between phonics and phonemic awareness--phonemic awareness places emphasis on oral language, while phonics places emphasis on written language but does not exclude the oral. (Contains 2 Internet addresses and 15 references.) (NKA)

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Phonological Awareness

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Introduction

Researchers have studied problems children experience in reading for many years. During the 1950s and 1960s research centered around the visual perceptual aspects of reading (Wilson, 1998, p. 5). When it was discovered that this did not increase reading ability, research turned to investigating the auditory modality in the 1970s.

"Haddock (1976) found that teaching preschoolers to blend separated phonemes and to associate a limited number of letter-sound correspondences resulted in transfer to word reading" (Davidson and Jenkins, 1994, p. 149 as cited in Wilson, 1998, p. 5). While several studies during the 1970s found that auditory skills greatly affected reading, emphasis was still not placed on phoneme analysis (Williams, 1984 as cited in Wilson, 1998, p. 6).

During the 1980s importance was placed on the reader's language perception problems. It was discovered that poor readers were "not making full use of auditory and visual presentations of the stimulus items which they require" (Wilson, p. 6).

The focus of research during the 1990s has been early detection of readers who are considered at-risk. The significance placed on early detection has led researchers to study the impact phonological awareness has on young children in their early reading activities.

What is phonological awareness?

Smith defines phonological awareness as "sensitivity to the sound structure of language and a conscious ability to detect, combine, and manipulate different sizes of sound units" (Smith, *Phonological Awareness*, 1995, p. 3). A more simplified definition states that "phonemic awareness is the ability to hear the individual sounds that make up words; an understanding that speech is composed of individual sounds" (Wilson, p. 9).

To accurately understand phonological awareness, it is important to understand the difference between phonics and phonemic awareness. Phonics is defined as "[t]he various ways of teaching children the relationship between spelling patterns and sound patterns. The complex relationship between the sounds of language and the system of spelling" (Wilson, p. 9). Phonemic awareness is awareness of "discrete individual sounds that correspond to individual letters" (Wilson, p. 8). The distinguishing difference between the two is that phonemic awareness places emphasis on oral language; phonics places emphasis on written language, but does not exclude the oral (Wilson, p. 9).

What are the results of teaching young children phonological awareness?

Research during the past two decades overwhelmingly supports the link between phonological awareness and reading acquisition in young children. (Bernstein & Ellis, 2000; de-Jong, Seveke, & van-Veen, 2000; Ehri, Nunes, Willows, Schuster, Yaghoub-Zadeh, & Shanahan, 2001; Goswami, 2002) Phonological awareness assists children in making the transition from spoken language to written language.

Children rarely have difficulty in learning to speak. "By the time they are six years old, most children command a vocabulary of 13,000 words and a mere one year later it has grown to 21,600" (Busink, 1997, p. 200). While we hope that children will translate that fluency to the printed page, reading does not always come as easily. According to Adams "[i]f children cannot hear and manipulate the sounds in spoken words, they have an extremely difficult time learning how to map those sounds to letters and letter patterns—the essence of decoding" (cited in Wilson, p. 15). Busink explains by using the example of the word cat.

> "When children see the word *cat*, they must be able to perceive it as a meaningful blend of sounds represented by the letters /c/, /a/, /t/. Yet, although knowledge of the alphabet is necessary, teachers working with children are continually reminded that knowledge of letters is not sufficient for successful decoding. In order to apply the alphabetic principle to 'sounding out' words, children first have to realize that words can be 'sounded'" (Busing, pp. 200-01).

"Phonological awareness is considered a type of metalinguistic ability that allows children to reflect on and manipulate the auditory units of spoken language" (Olson, *Reading and Writing Quarterly*, 1993, p. 352). Goswami and Bryant suggest that there are three forms of phonological awareness: syllables, onset and rimes, and phonemes (Olson, p. 352).

Dividing words into syllables comes easily to children. Onsets and rimes are more complicated. Onsets "can be referred to as anything before or up to the first vowel in a word" (Wilson, p. 4), for example the sound /buh/ in *bat*. Rime "can be referred to as anything after the onset, beginning with the first vowel" (Wilson, p. 5), for example /at/ in the word *bat*. Phonemes are

> "discrete individual sounds that correspond to individual letters" (Smith, *Synthesis of Research*, 1995, p. 8). Phonics curriculums introduce children to the names of the 26 letters of the alphabet and the sounds they represent, but Olson notes that "in order to use their phonics knowledge, children must be able to manipulate phonemes" (Olson, p. 353).

Various studies have been conducted to determine whether phonological awareness training leads to more skillful and fluent early readers. Citing several researchers "Juel, 1988; Juel, Griffith, & Gough, 1986; Prate & Brady, 1988; Tuner, Herriman, & Nesdale, 1988)" Olson maintains that "evidence repeatedly indicates that phonological awareness indeed is necessary for children to become successful readers" (Olson, p. 353). Stanovich (1993-94) maintains that it is "the best predictor of the ease of early reading acquisition, better even than IQ, vocabulary, and listening comprehension" (Sensenbaugh, 1996, p. 2).

A study by Bradley and Bryant (1983) shows the link between phonological awareness and successful early reading acquisition.

> "Children low in ability to process sounds were taught with the help of pictures, that words can be categorized in different ways, depending on the position of shared sounds...One group received only the basic training while a second group was also taught, with the help of plastic letters, how each shared sound was represented by a letter of the alphabet. After two years, both groups, but especially the letter-sound trained group, were significantly ahead of the control group on measures of reading and spelling. Follow-up testing when the children were in their early teens showed that these children are continuing to do well in reading (Truch, 1991). In contrast, the control children who received no instruction in phonological processing continued to struggle even though they had received other remedial instruction" (Busink, p. 202).

Lundberg, Frost, and Petersen (1988) designed a program to teach phonological awareness skills to preschool children with similar results.

> "Small groups of Danish preschool children participated in daily sessions of phonologically based games and exercises...During follow-up testing in grades one and two, the experimental group performed significantly better than the control group on measures of reading and spelling" (Busink, pp. 202-03).

In 1991, Byrne and Fielding-Barnsley evaluated a program designed to teach preschool children about phonological structure. One year later a follow-up was conducted on the same children.

> "The passers had a superior knowledge of phoneme identity as well as word identification, pseudoword identification, and spelling. In 1995, Byrne and Fielding-Barnsley conducted a two and three year follow-up including the same children now in first and second grade and a new preschool trial. 'The most prominent finding in this follow-up investigation is the continuing superiority of the children from the experimental condition in decoding, as measured by accuracy in reading pseudowords, and signs of superiority in reading comprehension'" (Wilson, 1998, p. 13).

In the research synthesis by Smith, Simmons, & Kameenui (1995), "none of the primary or secondary sources reviewed in the research synthesis disputed the hypothesis that phonological awareness plays a central role in reading acquisition" (Smith, *Phonological Awareness*, p. 3). Because the research findings so strongly support phonological awareness as a prerequisite for reading acquisition, instruction of phonological awareness is considered obligatory (Wilson, p. 3).

Research findings recommend that "conspicuous strategies" be employed in teaching children to hear and manipulate sounds (Smith, p. 4). "The processes of phonological awareness, including phonemic awareness, must be explicitly taught" (ERIC Clearinghouse, 1995, p. 3). Smith adds that phonological awareness should not be "left to either natural development in the absence of instruction or inference by the learner during instruction" (Smith, p. 4). She gives two reasons why phonological awareness needs to be explicitly taught.

1. "[P]honemes are not easy to isolate...phonemes are coarticulated (e.g. /duh/ instead of /d/)...developmental work in phonological awareness suggests that detection of phonemes is neither natural nor acquired in the absence of instruction for many children (Liberman & Shankweiler, 1985)" (Smith, pp. 4-5).
2. "[A]coustical properties and hierarchical development in language obscure perception of individual phonemes" (Smith, p. 5).

Smith cites a study conducted by Cunningham (1990) with kindergartners and first graders.

> "The study compared two instructional approaches across kindergarten and first grade: (a) letter-sound correspondence and skill training in phonemic awareness, and (b) letter-sound correspondence, skill training, and instruction in strategic use of phonemic awareness skills in context of reading. Adding explicit instruction in strategic application of the skills to instruction in letter-sound correspondence and skill training in phonological awareness resulted in significant improvement in reading" (Smith, *Syntheses of Research on Phonological Awareness*, 1995, p. 29).

According to Yopp (1992) research also indicates that "further reading instruction heightens their awareness of language, assisting then in developing the later stages of phonemic awareness...Phonemic awareness is both a prerequisite for and a consequence of learning to read" (Sensenbaugh, 1996, p. 2). Stahl and Murray (1994) concurred stating: 'it may be that certain levels of phonological awareness, either as measured by different tasks or by different levels of linguistic complexity, precede learning to read, whereas more advanced levels may result from learning to read" (Wilson, 1998, p. 6).

Phonological awareness can be taught whether schools are using the whole language or basal approach to teach reading. In a research study conducted by Griffith, et al (1992), they "found that children with high phonemic awareness outperformed those with low phonemic awareness on all literacy measures, whether they were taught using a whole language approach or traditional basal instruction" (Sensenbaugh, 1996, p. 3).

Researchers have cautioned that although phonological awareness is causal to reading acquisition, it is insufficient on its own. "Alphabetic understanding is also a prerequisite to learning to read new words independently. Consequently, strategic integration of letter-sound correspondence instruction with phonological awareness is necessary in beginning reading instruction" (Smith, *Phonological Awareness*, 1995, p. 10).

What is the outcome when phonological awareness is not taught to students at an early age? According to Chall's model (1983) "beginning reading instruction for children who lack phoneme awareness is likely to result in reading difficulty" (Stahl, et al, 1997, p. 3). Stahl also cites Juel's (1998) finding "that no child who ranked in the lowest 25% in phoneme awareness at the beginning of first grade ranked higher than the lowest 25% in reading achievement by fourth grade" (Stahl, 1997, p. 3).

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Conclusion

Based on research, the evidence is conclusive that teaching phonological awareness to young children greatly facilitates the reading process. Not only do children continue to score better and perform well in reading, but reading related activities such as spelling and comprehension skills also improve (Wilson, p. 20).

Adams (1990) declares that "[t]he discovery of the nature and enabling importance of phonemic awareness is said to be the single greatest breakthrough in reading pedagogy in this century" (Wilson, 1998, p. 2).

Internet Resources

* Phonological Awareness: Instructional and Assessment Guidelines

This article defines phonological awareness and discusses historic and contemporary research findings regarding its relation to early reading. Research-based guidelines for teaching phonological awareness and phonemic awareness to all children are also described.

http://www.ldonline.org/ld_indepth/reading/chard_phono_awareness.html

* Phonemic Awareness and the Teaching of Reading

A position statement from the board of directors of the International Reading Association, including the definitions of phonemic awareness and how phonemic awareness words facilitate reading acquisition.

http://www.reading.org/pdf/phonemic_aware.pdf

References

Atterman, J.S. (1997). Reading strategies for beginning and proficient readers. 8 pages. [ED416447]

Bernstein, L., & Ellis, N. (2000). *There are three sounds in the word CAT: How phonemic awareness works to facilitate reading acquisition.* [ED448408]

Busink, R. (1997). Reading and phonological awareness: what we have learned and how we can use it. *Reading Research and Instruction, 36*(3), 199-215. [EJ547174]

De-Jong, P. F., Seveke, M. J., & van-Veen, M. (2000). Phonological sensitivity and the acquisition of new words in children. *Journal of Experimental Child Psychology, 76*(4), 275-301. [EJ611845]

Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly, 36*(3), 250-287. [EJ629253]

ERIC Clearinghouse on Disabilities and Gifted Education (1995). *Beginning reading and phonological awareness for students with learning disabilities.* ERIC Digest. 4 pages. [ED392197]

Fitzsimmons, M.K. (1998). *Beginning Reading.* ERIC Digest. 3 pages. [ED418515]

Goswami, U. (2002). Phonology, reading development, and dyslexia: A cross-linguistic perspective. *Annals of Dyslexia, 52*, 141-163. [EJ657411]

Olson, M. (1990). Phonemic awareness and reading achievement. *Reading Psychology, 11*(4), 347-53). [EJ418078]

Olson, M.W. & Priscilla Griffith (1993). Phonological awareness: the what, why, and how. *Reading and Writing Quarterly, 9*(4), 351-60. [EJ474132]

Sensenbaugh, R. (1996). *Phonemic awareness: an important early step in learning to read.* ERIC Digest. 3 pages. [ED400530]

Smith, S.B. et al (1995). *Phonological awareness: curricular and instructional implications for diverse learners.* Technical Report 22. 24 pages. [ED386869]

Smith, S.B. et al (1995). *Synthesis of research on phonological awareness: principles and implications for reading acquisition.* Technical Report 21. 72 pages. [ED386868]

Stahl, S.A. (1992). Saying the "p" word: nine guidelines for exemplary phonics instruction. *The Reading Teacher, 45*(8), 618-25. [EJ441001]

Stahl, S.A. et al (1997). *Fluency-oriented reading instruction.* Reading Research Report 79. 55 pages. [ED405554]

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